

Cyprus Thompson Creek

Post Office Box 62  
Clayton, Idaho 83227  
Telephone (208) 838-2200

February 7, 1989

Mr. Wally Scarburgh  
USEPA  
Idaho Operations Office  
422 W. Washington Street  
Boise, Idaho 83702

RECEIVED  
FEB 10 1989

IDAHO OPERATIONS OFFICE

Re: Cyprus Thompson Creek Pit Dewatering

Wally:

As I stated in our phone conversation of February 6, 1989, Cyprus Thompson Creek (CTC) would like to intermittently pump excess ground water seeping into the pit to Buckskin Creek. By excess water, I mean the difference between the inflow into the pit and the capacity of the current pit dewatering system.

Below is a brief history of the water problems:

Since mining began in 1981 at CTC, very little ground water was encountered in the pit with the exception of seasonal runoff. During early 1988 water began accumulating in the southeast corner of the pit floor on the 7250 level. Water also began showing up at the shovel face on this level. A small earthen dike (5'X100') was dumped on the pit floor and water pumped away from the shovel face and stored behind the dike. The flow was small enough that it was originally thought through evaporation and use as a dust suppressant on the haul roads that the water would be no problem. However, by the first of November, more than five million gallons of water was impounded in the pit. It was also necessary at that time to drop to the next level.

In late November, a permanent pit dewatering system had been installed. The water was being pumped away from the shovel face to a sump and then into the mill tailings circuit to be used as makeup water. The system consists of 15,000 ft. of 6" Drisco pipe, 3000 ft. from pit to booster station and 12,000 ft. from booster to tailings pond, one 200 GPM sump pump, one 200 GPM booster pump, one 12,000 gallon surge tank and valves with controls for automatic operation (see diagram).

Various problems have occurred with the system since start-up. Initially, the line was partially blocked with rocks, therefore designed pumping capacity was not met. In late December, the line froze solid and had to be thawed out. In late January, this occurred again. With the above problems CTC has never been able to catch up with the inflow of ground water into the pit.

Wally Scarburgh  
Page 2

To continue mining, we need to immediately dewater the pit floor. CTC would like to intermittently pump the excess ground water to Buckskin Creek (see diagram). This water will be discharged to Thompson Creek through NPDES point 001. Water quality of pit water can be seen in Table 1. At the present time, the Buckskin sediment pond is nearly empty and will take some time before a discharge occurs.

It is estimated that CTC will pump about 300 GPM to Buckskin for one to two weeks. Thereafter, pumping would be 1-3 hours per day if needed. The current dewatering system may keep up with the inflow. This will last until Spring runoff when it is estimated that pumping will occur 24 hours per day for three to six weeks. After the 7150 level is mined out in June, no further mining activity will occur on the pit floor for some time, but the pit will still need to be dewatered.

If you have any questions, please don't hesitate to contact me.

Sincerely,



Bert Doughty  
Supervisor  
Environmental Affairs

BD:bw

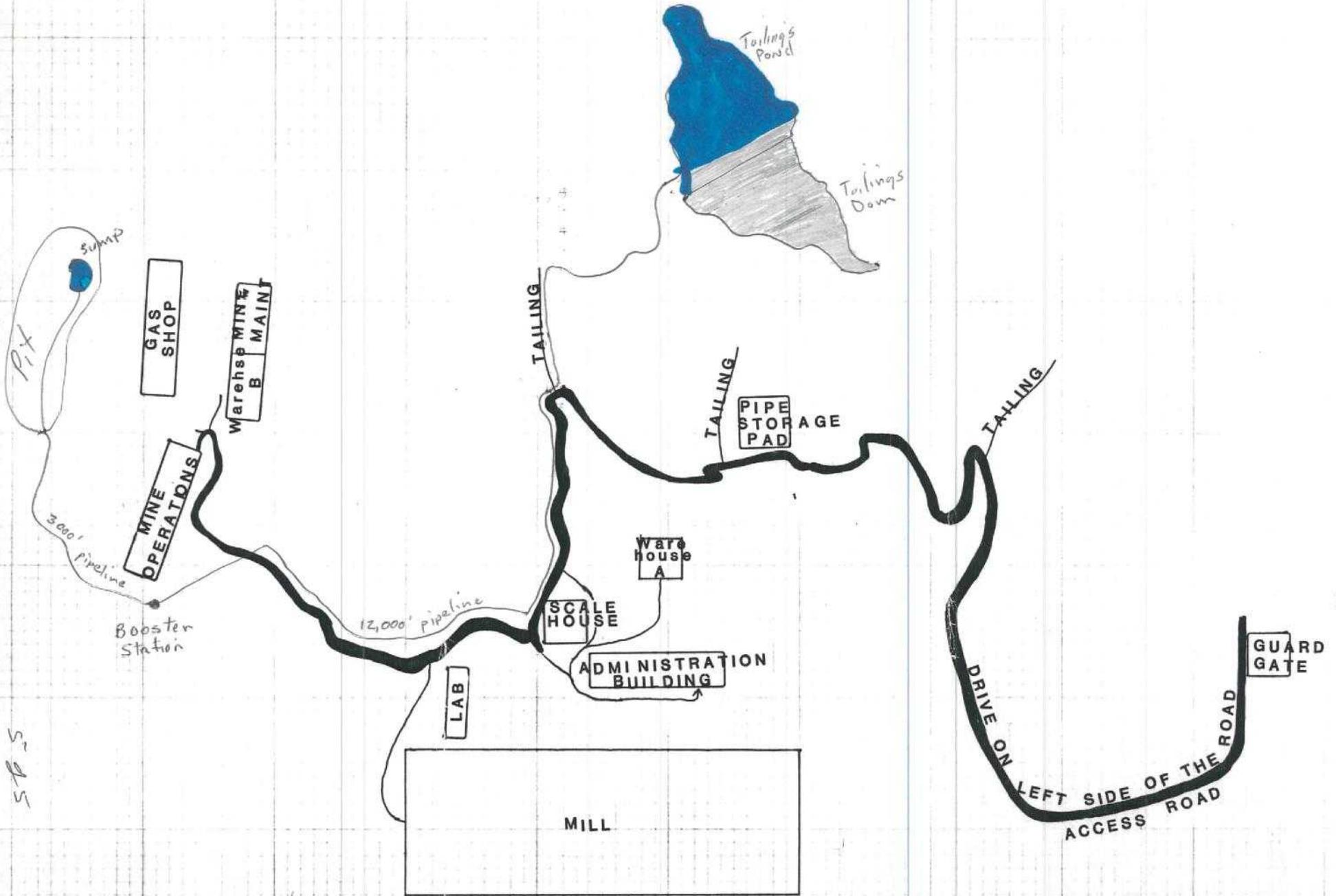
TABLE 1

	<u>9/28/88</u> <u>Pit 2</u>	<u>12/6/88</u> <u>Pit 3</u>	<u>12/13/88</u> <u>Pit 1</u>	<u>12/13/88</u> <u>Pit 3</u>
As	0.005	0.005	0.005	0.053
Cd	0.005	0.013	0.008	0.005
Cu	0.01	0.01	0.01	0.01
Pb	0.09	0.05	0.05	0.05
Hg	0.0005	0.0005	0.0005	0.0023
Zn	0.014	0.167	0.005	0.005

	<u>12/14/88</u> <u>Pit 2</u>	<u>12/16/88</u> <u>Pit 3</u>	<u>12/21/88</u> <u>Pit 3</u>	<u>12/21/89</u> <u>Pit 1</u>	<u>01/04/89</u> <u>Pit 3</u>
As	0.006	0.042	0.107	0.007	0.129
Cd	0.012	0.006	0.006	0.005	0.005
Cu	0.01	0.01	0.01	0.01	0.02
Pb	0.05	0.05	0.06	0.05	0.05
Hg	0.001	0.0005	0.0005	0.0005	0.0005
Zn	0.005	0.005	0.043	0.036	0.007

# CYPRUS THOMPSON CREEK



Not to scale